



Screen Printing Troubleshooting Guide

General guidance. Your ink, emulsion and chemical makers' directions come first.

Pinholes

Small dots of open mesh that print where they shouldn't.

Common causes

- Dust, lint or debris on the screen, film or exposure glass
- Emulsion coated over dirty or poorly degreased mesh
- Underexposure leaving the stencil weak
- Air bubbles in the emulsion

Try

- Degrease mesh and let it dry in a clean, dust-free area
- Clean the film and glass before exposing
- Check exposure with an exposure test (your emulsion maker's method)
- Block small pinholes with screen filler or blackout tape before printing

Bleeding

Ink spreads past the edges of the design, giving fuzzy or fat edges.

Common causes

- Too much squeegee pressure or too many strokes
- Ink too thin or too warm
- Off-contact too low
- Mesh too coarse for the detail
- Water-based ink migrating on absorbent fabric

Try

- Use less pressure and fewer strokes
- Check off-contact and set per your press setup
- Use a higher mesh for fine detail
- Avoid over-reducing the ink

Ghosting / ghost image

A faint image of an old design that remains in the mesh after reclaim.

Common causes

- Ink or emulsion residue stained into the mesh
- Ink left to dry in the screen
- Reclaim chemicals not fully rinsed or left to dry on the screen

Try

- Clean ink out promptly after the run
- Use a haze/ghost remover per its directions after reclaim
- Rinse thoroughly with water; follow chemical dwell times

Fibrillation

Fibers poke up through the ink after printing or washing, making the print fuzzy or speckled.

Common causes

- Loose fibers on the garment surface (common on lower-twist or heavily napped fabric)
- Thin ink deposit that can't lock fibers down
- Underbase not flattened

Try

- Print-flash-print the underbase so fibers get locked down
- Use a smoothing/flattening screen or heat press on the underbase where appropriate
- Use a slightly heavier deposit or a lower mesh for the underbase
- Try a smoother, ring-spun garment if possible

Poor cure

Print cracks when stretched, feels tacky, or washes out.

Common causes

- Ink film never reached the maker's cure temperature
- Dwell too short or dryer belt too fast
- Thick deposit not heated all the way through
- Dryer setting read instead of actual ink temperature

Try

- Measure ink film temperature with a probe or temp strips
- Slow the belt or raise heat within the ink maker's guidance
- Stretch and wash test samples before running
- See the Cure Temp Guide on this site

Moiré

A visible wavy or checkered pattern in halftone prints.

Common causes

- Halftone frequency (LPI) interfering with mesh count
- Halftone angle lining up badly with the mesh threads
- Mesh stretched at an angle or film placed crooked

Try

- Choose an LPI that suits your mesh (see the Mesh & LPI Chart)
- Try a different halftone angle (many printers start around 22.5°)
- Keep film square to the mesh when exposing

Stencil breakdown

Emulsion wears, peels or washes out during printing.

Common causes

- Underexposure (stencil not fully hardened)
- Poor degreasing before coating
- Screen not fully dry before exposure
- Emulsion not suited to the ink (e.g. plastisol-only emulsion with water-based ink)

Try

- Run an exposure test and expose fully
- Degrease and dry the screen completely before coating and exposing
- Use an emulsion rated for your ink; some need post-exposure or hardener for water-based
- Follow your emulsion maker's storage and coating directions

Dye migration

Dye from a polyester garment bleeds into the ink, e.g. a white print turning pink on red poly.

Common causes

- Polyester dyes turn to gas (sublimate) under heat
- Curing hotter or longer than needed
- Using ink not designed for polyester

Try

- Use a low-bleed or low-cure ink made for polyester
- Use a bleed-blocker underbase where recommended
- Cure at the lowest temperature the ink maker allows
- Test a sample and let it sit; migration can appear hours later